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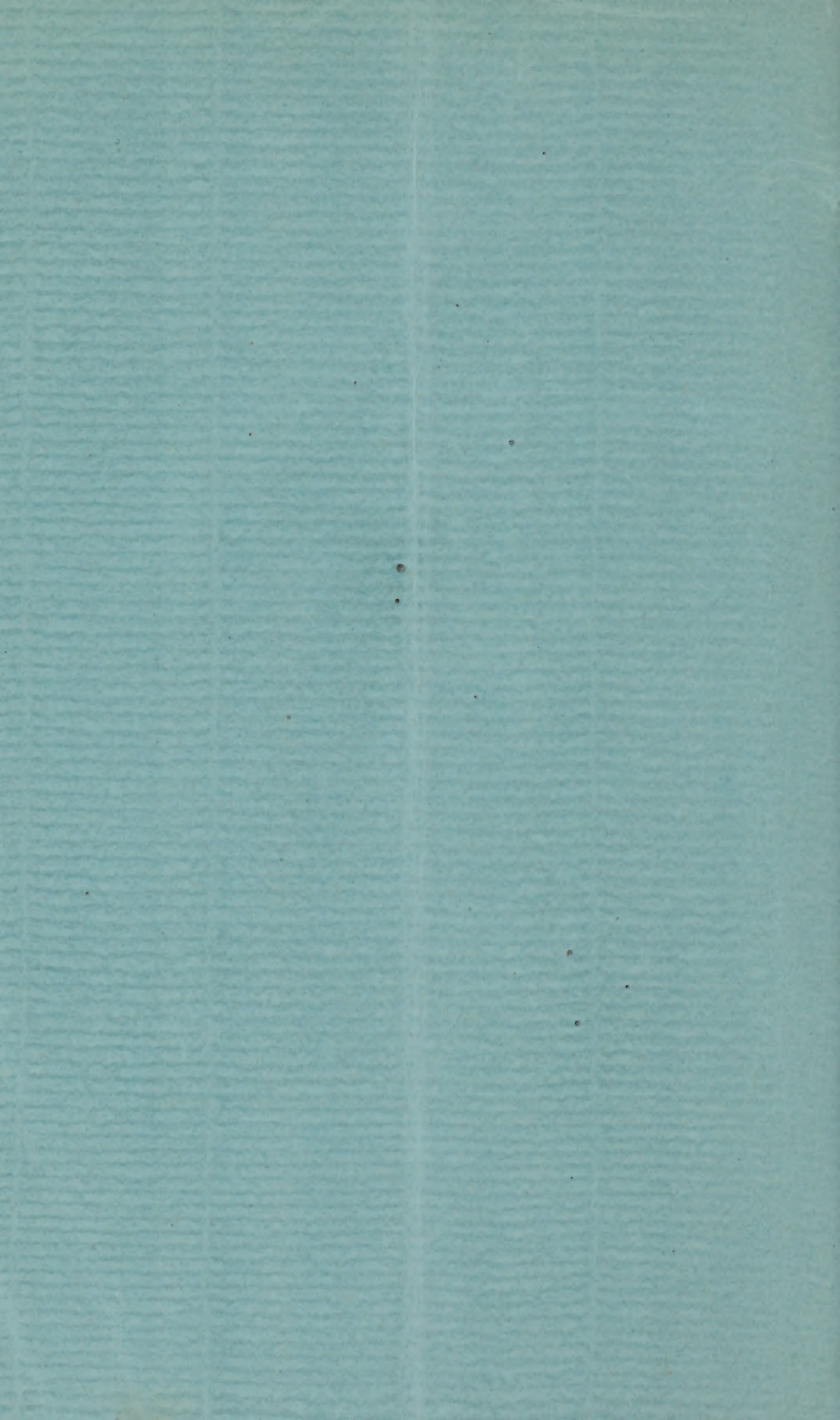
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By SAMUEL G. DIXON, M.D.,
Professor of Bacteriology, etc., Academy of Natural Sciences.

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CARE IN THE USE OF TUBERCLE BACILLUS AS A REMEDY IN TUBERCULOSIS.

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AFTER a careful study of the action of the toxic substance found in the tubercle bacillus, upon the human economy already the victim of tuberculosis, I venture to cite a few facts regarding the same.

The first case is that of a man who presented himself at a hospital for treatment; without fever; with small whitish nodules scattered over the pharynx; slight cough, and dullness over the right apex; tubercle bacilli in sputum. Injection of the new remedy produced an ulceration of the entire pharynx and a sloughing of the same, tubercle bacilli being found in the slough. After treatment for six weeks the patient lost over twelve pounds in weight. The dose was increased to 100 milligrammes. He died the day following the 100-milligramme injection, of acute miliary tuberculosis of the intestines, heart, liver, kidneys, pleuræ, omentum, etc. The history of this case points strongly to the probability that the acute miliary tuberculosis developed during the treatment of the case, owing to the fact that the patient did not develop an abnormal temperature before the injection of the remedy.

From this and many other cases, I feel quite well satisfied that, if by treatment with the new remedy, we set up an extensive ulceration that perforates any of the vascular membranes, we must expect a general tubercular infection.



Another case of death caused by the treatment was by perforation of the tubercular ulceration through the walls of the intestine.

Just here I beg to call attention to the fact that tuberculosis of the œsophagus, stomach, and intestine are very liable to acute exacerbation under the action of this organic remedy.

Another unfavorable case worthy of mention occurred quite recently under Fraenkel. He had a case of tubercular phthisis, with consolidation and without cavities, that in the course of treatment developed by metastasis, tuberculosis of the tongue. I may also mention a case of a child with knee-joint disease, that developed by metastasis during treatment, seven solitary tubercles in the brain, each one at least one-fourth of a centimeter in diameter.

At present, I regret to say that I fear our remedy, as generally prepared from the tubercle bacillus, is much more valuable as a prophylactic than as a curative agent, yet I have not by any means given up all hope of its having remedial power. Its diagnostic power, shown by experimentation on the human economy, has fully corroborated my experience with it on animals, yet I am not ready to affirm that it does not react also on other pathological conditions, while its action on tuberculous man does not fully corroborate my results obtained in animals with artificially produced tuberculosis. I cannot but indulge myself with the expectation that the time may be approaching when we shall be able, not merely to destroy tuberculous tissue, but the micro organism that we find so intimately associated with tuberculosis.

In the meantime, if to be used in the human economy, I would recommend the most careful administration of the new toxic agent, and even with the most favorable cases, that the initial dose does not exceed one-half a milligramme, and should the tissue

not manifest a tendency to extensive ulceration, as will be shown by a lower or slightly higher degree of fever on the days intervening between the injections, the treatment may be cautiously proceeded with. If a decidedly higher temperature is manifested on the intervening days, the welfare of our patient certainly demands a discontinuance of the treatment. This, however, need not of necessity bar a physician, who has seen fit to use the remedy, from making another attempt, providing the patient presents more favorable conditions, particularly as there are a few cases reported as being much benefited by the remedy.

In some of Prof. Gerhardt's cases the catarrhal condition of the apices has been reduced, while the dullness is gradually decreasing; while Prof. Koch has a few cases at the Moabit in which bacilli have remained absent for some months.

As I have never felt sufficient confidence in the toxic effects produced by subcutaneous injections of devitalized tubercle bacilli, upon the animal economy suffering with tuberculosis, to risk its use in man, I have, as stated in former communications for some time past, been using a long line of other agents, and I believe that it is only right and proper for me to again call attention of all workers in bacteriological investigation to what I have before strongly hinted at, when alluding to the effects of food, light, temperature, etc., upon the growth of the tubercle bacillus on an artificial culture pabulum.

Glycerine is one of the substances that I have employed in excess since 1889, as specially mentioned in previous articles, and with a marked effect on the growth of the tubercle bacillus.

After satisfying myself that I had pretty clearly established the effect of an excess of glycerine in the nutritive agar-agar glycerine medium upon the growth of the organisms, I proceeded to introduce

large doses subcutaneously into the animal economy where a tuberculous process was going on.

In the few cases thus treated, there has, to all appearances, been produced a marked change in the tuberculous process in the animals, therefore to facilitate matters, I hasten to place before my colleagues the suggestion indicated as above, and I should be very glad if they would themselves try its action in the animal economy, and report their observations.



